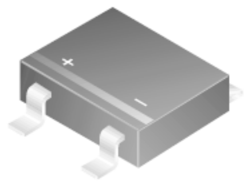
FAIRCHILD SEMICONDUCTOR®

July 2010

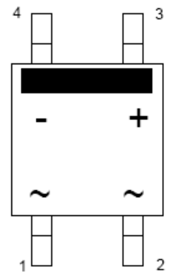
MB10S
Bridge Rectifier

Features

- Low leakage
- Surge overload rating : 35 amperes peak.
- Ideal for printed circuit board.
- UL certified, UL #E111753 and E326243.



SOIC-4
Polarity symbols molded
or marking on body



Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	1000	V
V_{RMS}	Maximum RMS Bridge Input Voltage	700	V
V_R	DC Reverse Voltage (Rated V_R)	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, @ T_A = 50°C On Glass-epoxy P.C.B. On Aluminum substrate	 0.5 0.8	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	35	A
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	-55 to +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may by impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	1.4	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient,* per leg	85	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead,* per leg	20	°C/W

* Device mounted on PCB with 0.5" x 0.5" (13 x 13 mm) lead length

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_F	Forward Voltage, per bridge @ 0.5 A	1.0	V
I_R	Reverse Current, per leg @ Rated V_R T_A = 25°C T_A = 125°C	5.0 0.5	µA mA
	I^2t rating for fusing t < 8.3 ms	5.0	A^2s
C_T	Total Capacitance, per leg V_R = 4.0V, f = 1.0MHz	13	pF

Typical Performance Characteristics

Figure 1. Derating Curve For Output Rectified Current

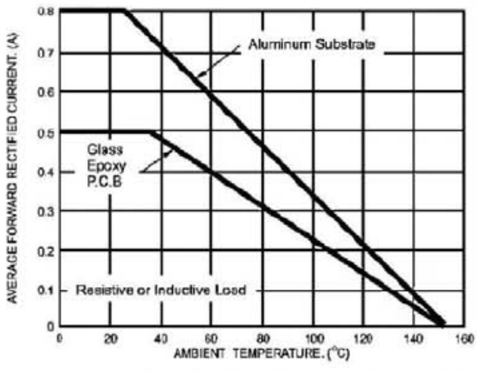


Figure 2. Typical Reverse Leakage Characteristics Per Leg

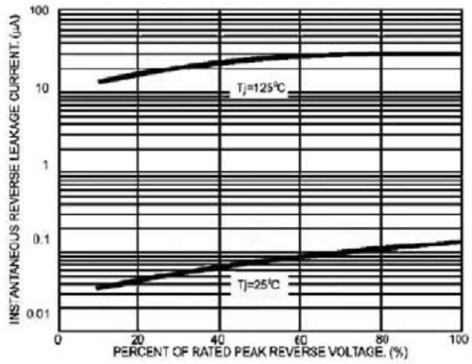


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

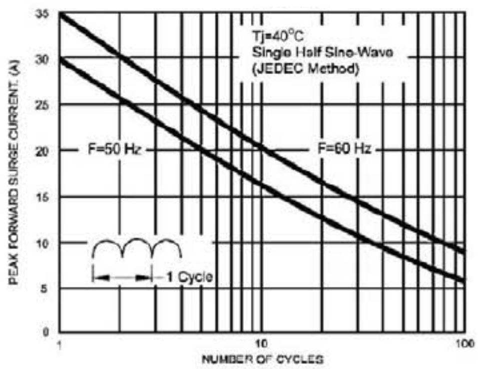


Figure 4. Typical Junction Capacitance Per Leg

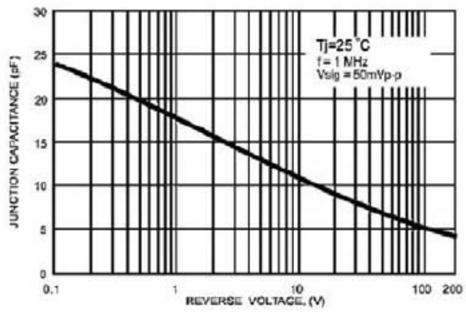
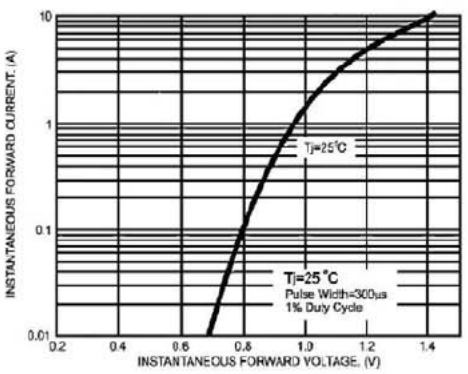


Figure 5. Typical Forward Voltage Characteristics Per Leg



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Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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